

Appl. No. 10/028,379

Page 7 of 12

Response

Reply to Office action of June 3, 2003

REMARKS/DISCUSSION OF ISSUES

In the Final Office Action, Examiner Tran rejected pending claims 1-7, 9-12, 15-17, and 19-22 under 35 U.S.C. §102(b) over U.S. Patent No. 4,961,032 to *Rodriguez-Cavazos*. To warrant this rejection of claims 1-7, 9-12, 15-17 and 19-22, *Rodriguez-Cavazos* must show each and every limitation of independent claims 1, 12 and 19 in as complete detail as is contained in independent claims 1, 12 and 19. See, MPEP §2131. The Applicant respectfully traverses this rejection, because *Rodriguez-Cavazos* fails to disclose and teaches away from:

1. "a low-power dissipating switching network which switches between said low voltage power supply and said high voltage power supply relative to said high voltage power supply" as recited in independent claim 1;
2. "wherein said positive and negative polarity convergence circuits further include a switching network which operates relative to said high positive voltage rail and said high negative voltage rail" as recited in independent claim 12; and
3. "a switching network switching the connection of said output stage to said polarity convergence circuit between said high voltage rail and said low voltage rail relative to said high voltage rail" as recited in independent claim 19.

Appl. No. 10/028,379

Page 8 of 12

Response

Reply to Office action of June 3, 2003

Specifically, *Rodriguez-Cavazos* discloses a switching network employing (1) a pair of emitter-follower voltage regulators 11 and 13 in a first embodiment illustrated in FIG. 1 of *Rodriguez-Cavazos*, (2) emitter-follow voltage regulator 11 in a second embodiment illustrated in FIG. 2 of *Rodriguez-Cavazos*, (3) a pair of emitter-follower voltage regulators Q3 and Q6 in a third embodiment illustrated in FIG. 3 of *Rodriguez-Cavazos*, (4) emitter-follower voltage regulator Q3 in a fourth embodiment illustrated in FIG. 4 of *Rodriguez-Cavazos*, and (5) emitter-follower voltage regulator Q6 in a fifth embodiment illustrated in FIG. 4 of *Rodriguez-Cavazos*. In operation, *Rodriguez-Cavazos* teaches a cutoff mode for the voltage regulators when connecting an output stage to a low voltage rail (e.g., a cutoff mode of transistor Q3 when connecting $+V_L$ to V_{OUT} as illustrated in FIGS. 3 and 4), and an active mode for the voltage regulators when connecting an output stage to a high voltage rail (e.g., an active of transistor Q3 when connecting $+V_H$ to V_{OUT} as illustrated in FIGS. 3 and 4). See, *Rodriguez-Cavazos* at column 7, lines 53 to column 8, line 55.

It is well known in the art that (1) an emitter-follower implements a reverse bias of a collector-base junction and a reverse bias of an emitter-base junction when operating in a cutoff mode, and (2) an emitter-follower implements a reverse bias of a collector-base junction and a forward bias of an emitter-base junction when operating in an active mode. It is also well known that a switching between the cutoff mode

Appl. No. 10/028,379

Page 9 of 12

Response

Reply to Office action of June 3, 2003

(reverse bias of an emitter-base junction) and the active mode (forward bias of an emitter-base junction) is relative exclusively to the base voltage and the emitter voltage.

Rodriguez-Cavazos teaches (1) a connection of a high positive voltage rail $+V_{HIGH}$ to a collector of voltage regulator 11 as illustrated in FIGS. 1 and 2, (2) a connection of a high negative voltage rail $-V_{HIGH}$ to a collector of voltage regulator 13 as illustrated in FIG. 1, (3) a connection of a high positive voltage rail $+V$ to a collector of voltage regulator Q3 as illustrated in FIGS. 3 and 4, and (4) a connection of a high negative voltage rail $-V_H$ to a collector of voltage regulator Q6 as illustrated in FIGS. 3 and 5. Because the collector-base junction remains reverse biased during any switch between the cutoff mode and the active mode, Rodriguez-Cavazos fails to teach a switching between the cutoff mode (reverse bias of an emitter-base junction) and the active mode (forward bias of an emitter-base junction) relative to the collector voltage (i.e., the high positive voltage rail for voltage regulators 11 and Q3, and the high negative voltage rail for voltage regulators 13 and Q6).

It is further well known that, for a saturation mode, an emitter-follower implements a forward bias of a collector-base junction and a forward bias of an emitter-base junction. Thus, if Rodriguez-Cavazos taught a switching between the cutoff mode and the saturation mode, then Rodriguez-Cavazos could be interpreted as teaching an operation of the switching network relative to the collector voltage of voltage regulators 11, 13, Q3 and Q6. However, Rodriguez-Cavazos teaches away from using

Appl. No. 10/028,379

Page 10 of 12

Response

Reply to Office action of June 3, 2003

voltage regulators 11, 13, Q3 and Q6 as a switch (i.e., switching between the cutoff mode and the saturation mode), and therefore teaches away from an operation of the switching network relative to the collector voltage of voltage regulators 11, 13, Q3 and Q6. See, *Rodriguez-Cavazos* at column 8, lines 4-31.

Withdrawal of the rejection of independent claims 1, 12 and 19 under 35 U.S.C. §102(b) over *Rodriguez-Cavazos* is therefore respectfully requested.

Claims 2-11 depend from independent claim 1. Therefore, dependent claims 2-11 include all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 2-11 are allowable over *Rodriguez-Cavazos* for at least the same reason as set forth with respect to independent claim 1 being allowable over *Rodriguez-Cavazos*. Withdrawal of the rejection of dependent claims 2-11 under 35 U.S.C. §102(b) over *Rodriguez-Cavazos* is therefore respectfully requested.

Claims 15-17 depend from independent claim 12. Therefore, dependent claims 15-17 include all of the elements and limitations of independent claim 12. It is therefore respectfully submitted by the Applicant that dependent claims 15-17 are allowable over *Rodriguez-Cavazos* for at least the same reason as set forth with respect to independent claim 12 being allowable over *Rodriguez-Cavazos*. Withdrawal of the rejection of dependent claims 15-17 under 35 U.S.C. §102(b) over *Rodriguez-Cavazos* is therefore respectfully requested.

Appl. No. 10/028,379

Page 11 of 12

Response

Reply to Office action of June 3, 2003

Claims 20-22 depend from independent claim 19. Therefore, dependent claims 20-22 include all of the elements and limitations of independent claim 19. It is therefore respectfully submitted by the Applicant that dependent claims 20-22 are allowable over *Rodriguez-Cavazos* for at least the same reason as set forth with respect to independent claim 19 being allowable over *Rodriguez-Cavazos*. Withdrawal of the rejection of dependent claims 20-22 under 35 U.S.C. §102(b) over *Rodriguez-Cavazos* is therefore respectfully requested.

In the Final Office Action, Examiner Tran also rejected pending claim 18 under 35 U.S.C. §103(a) over *Rodriguez-Cavazos*. Claim 18 depends from independent claim 12. Therefore, dependent claim 18 includes all of the elements and limitations of independent claim 12. It is therefore respectfully submitted by the Applicant that dependent claim 18 is allowable over *Rodriguez-Cavazos* for at least the same reason as set forth herein with respect to independent claim 12 being allowable over *Rodriguez-Cavazos*. Withdrawal of the rejection of dependent claim 18 under 35 U.S.C. §103(a) over *Rodriguez-Cavazos* is therefore respectfully requested.

Appl. No. 10/028,379

Page 12 of 12

Response

Reply to Office action of June 3, 2003

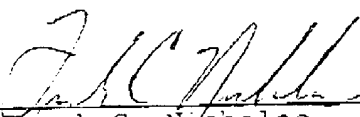
In view of the foregoing, Applicant respectfully requests that Examiner Tran withdraw the rejections of claims 1-12 and 15-22, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, Examiner Tran is respectfully requested to contact the undersigned at the telephone number listed below.

Dated: September 3, 2003Respectfully submitted,
CHRISTIAN ET AL

PHILIPS IP & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510-8001
Phone: (914) 333-9635
Fax: (914) 332-0615

Eric M. Bram
Registration No. 37,285
Attorney for Applicant

CARDINAL LAW GROUP
Suite 2000
1603 Orrington Avenue
Evanston, Illinois 60201
Phone: (847) 905-7111
Fax: (847) 905-7113


Frank C. Nicholas
Registration No. 33,983
Attorney for Applicant